IN THE CLAIMS

1. (Currently Amended) A method of acquiring a gated pilot signal in an expanded PN space split into a plurality of N non-overlapping groups of specific pilot offsets, wherein the N groups are defined such that when PN_INC = max, a search of only a first of the N groups is necessary for acquisition of the gated pilot signal, while when PN_INC < max, a search of N or fewer groups is necessary for acquisition of the gated pilot signal, the method comprising:

if PN_INC = max, searching only the first group to identify the gated pilot signal;

if PN_INC < max, searching at least the first group to identify the gated pilot signal, but fewer than N groups; and

identifying the gated pilot signal from the searched groups,

wherein the first group contains all possible specific pilot offsets for PN_INC = max.

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2. (Currently Amended) The method of claim 1, wherein N is four and max is four, and wherein a second group contains all possible specific pilot offsets for PN_INC = 2 not contained with the first group.

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~~3.~~ (Original) The method of claim 1, wherein the searched groups are searched in parallel.

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~~4.~~ (Original) The method of claim 1, wherein the searched groups are searched sequentially.

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~~5.~~ (Original) The method of claim 1, wherein the expanded PN space is an integer multiple of 32,768 chips, where the integer multiple is greater than one.

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~~6.~~ (Original) The method of claim 1, wherein the gated pilot signal conforms to IS-856 standard.

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~~7.~~ (Original) The method of claim 1, further comprising:

if the gated pilot signal is not identified after searching at least the first group, searching a last group of the N groups.

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8. (Currently Amended) A method for acquiring a gated pilot reference in a wireless communication system, comprising:

partitioning an overall code space in which the pilot reference may be found into a plurality of groups of codes, a first group of codes comprising code sets corresponding to all possible specific pilot offsets for PN_INC = max;

ordering the plurality of groups based on likelihood of detecting the pilot reference in each of the groups;

searching for the pilot reference in accordance with the ordered groups; and

terminating the searching upon acquisition of the pilot reference.

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9. (Original) The method of claim 8, wherein each code corresponds to a particular chip offset of a pseudo-noise (PN) sequence used to generate the pilot reference.

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10. (Original) The method of claim 9, wherein the overall code space is partitioned into four groups.

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11. (Currently Amended) The method of claim 9, wherein each group includes a plurality of code sets and each code set is representative of a specific PN sequence with [[at]] a particular offset.

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12. (Original) The method of claim 11, wherein the plurality of groups include a first group of code sets most likely to be used to generate the pilot reference and a last group of code sets least likely to be used to generate the pilot reference.

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13. (Original) The method of claim 8, wherein the searching for the pilot reference is performed for each group and includes

detecting for the pilot reference in a set of samples based on the codes in the group to provide one or more candidate peaks, and

processing each candidate peak to determine acquisition of the pilot reference.

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~~14~~. (Original) The method of claim ~~13~~, wherein the searching for the pilot reference further includes pipelining the detecting and processing for different groups to shorten pilot acquisition time.

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~~15~~. (Original) The method of claim ~~8~~, wherein the searching for the pilot reference is performed for each group and includes:

detecting for the pilot reference in a set of samples based on the codes in the group to provide a plurality of detected peaks,

dwelling on the plurality of detected peaks to provide one or more candidate peaks, and processing each candidate peak to determine acquisition of the pilot reference.

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~~16~~. (Original) The method of claim ~~15~~, wherein the detecting and dwelling are performed on different sets of samples.

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~~17~~. (Original) The method of claim ~~15~~, wherein the detecting and dwelling are performed using different sets of parameter values.

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~~18~~. (Original) The method of claim ~~15~~, wherein each group is partitioned into a plurality of segments, and wherein the detecting is performed on each of the plurality of segments and one or more detected peaks are provided for each segment.

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~~19~~. (Original) The method of claim ~~8~~, wherein the searching is performed using a plurality of stages, wherein each stage is associated with a respective set of parameter values used for the searching.

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~~20~~. (Original) The method of claim ~~19~~, wherein the searching is performed for the plurality of groups for one stage at a time.

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~~21~~. (Original) The method of claim ~~19~~, wherein the searching is performed for a first set of one or more groups for the plurality of stages followed by a second set of one or more groups for the plurality of stages.

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~~22~~. (Original) The method of claim ~~19~~, wherein the searching is performed using two stages.

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~~23~~. (Original) The method of claim ~~8~~, wherein the communication system is a CDMA system.

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~~24~~. (Original) The method of claim ~~23~~, wherein the CDMA system conforms to IS-856 standard.

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~~25~~. (Currently Amended) A method for acquiring a gated pilot reference in a wireless communication system, comprising:

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partitioning an overall code space in which the pilot reference may be found into a plurality of groups of non-overlapping code sets, wherein each code set is representative of a specific PN sequence with [[~~at~~]] a particular offset;

ordering the plurality of groups based on likelihood of detecting the pilot reference in each of the groups, with a first group being most likely to be used to generate the pilot reference and a last group being least likely to be used to generate the pilot reference;

searching for the pilot reference based on the plurality of groups, one group at a time, starting with the first group and ending with the last group; and

terminating the searching upon acquisition of the pilot reference,

wherein the first group contains all possible specific pilot offsets for PN_INC = max.

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~~26~~. (Currently Amended) A receiver unit in a wireless communication system, comprising:

a searcher element configurable to receive and correlate a first set of samples in accordance with a plurality of groups of PN sequences to provide correlated values used to detect a gated pilot reference, wherein the plurality of groups comprise an overall code space in which the pilot reference may be found, wherein a first group contains all possible specific pilot offsets for PN_INC = max, and are ordered based on likelihood of detecting the pilot reference in each

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of the groups, and wherein the plurality of groups are used to searched for the pilot reference based on their order and searching terminates upon acquisition of the pilot reference.

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~~27~~. (Original) The receiver unit of claim ~~26~~, further comprising:

a demodulation element configurable to receive and process a second set of samples based on a candidate peak, found via processing of the correlated values, to provide an indication of the acquisition of the pilot reference.

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~~28~~. (Original) The receiver unit of claim ~~27~~, further comprising:

a controller configured to direct operation of the searcher element and the demodulation element.

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~~29~~. (Original) The receiver unit of claim ~~28~~, wherein the controller is further configured to provide to the searcher element a set of values for parameters used to correlate the first set of samples with the groups of PN sequences.

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~~30~~. (Previously Presented) The method of claim 2, wherein each of the specific pilot offsets in the first group is either 0 or a multiple of 4.

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~~31~~. (Previously Presented) The method of claim ~~30~~, wherein each of the specific pilot offsets in a second group is a multiple of 2, but not of 4.

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~~32~~. (Currently Amended) The method of claim ~~10~~, wherein each of the specific pilot offsets in [[a]] the first group is either 0 or a multiple of 4.

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~~33~~. (Previously Presented) The method of claim ~~32~~, wherein each of the specific pilot offsets in a second group is a multiple of 2, but not of 4.

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~~34~~. (Previously Presented) The method of claim ~~25~~, wherein each of the specific pilot offsets in the first group is either 0 or a multiple of 4.

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~~35.~~ (Previously Presented) The method of claim ~~34~~, wherein each of the specific pilot offsets in a second group is a multiple of 2, but not of 4.

36. (Currently Amended) The receiver unit of claim 26, wherein each of the PN sequences in [[a]] the first group has a specific pilot offset of either 0 or a multiple of 4.

37. (Previously Presented) The receiver unit of claim 36, wherein each of the PN sequences in a second group has a specific pilot offset of a multiple of 2, but not of 4.

38. (Currently Amended) An article of manufacture comprising:

a computer usable medium having computer readable program code means embodied therein for causing a gated pilot reference to be acquired in a wireless communication system, the computer readable program code means in said article of manufacture comprising:

computer readable program code means for partitioning an overall code space in which the pilot reference may be found into a plurality of groups of codes, a first group of codes comprising code sets corresponding to all possible specific pilot offsets for PN_INC = max;

computer readable program code means for ordering the plurality of groups based on likelihood of detecting the pilot reference in each of the groups;

computer readable program code means for searching for the pilot reference in accordance with the ordered groups; and

computer readable program code means for terminating the searching upon acquisition of the pilot reference.

39. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for acquiring a gated pilot reference, said method steps comprising:

partitioning an overall code space in which the pilot reference may be found into a plurality of groups of codes, , a first group of codes comprising code sets corresponding to all possible specific pilot offsets for PN_INC = max;

ordering the plurality of groups based on likelihood of detecting the pilot reference in each of the groups;